

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number  
**WO 2005/072695 A1**

(51) International Patent Classification<sup>7</sup>:  
33/24, C08K 3/22

**A61K 7/42,**

(74) Agents: BENSON, John, Everett et al.; J.A. Kemp & Co.,  
14 South Square, Gray's Inn, London WC1R 5JJ (GB).

(21) International Application Number:  
PCT/GB2005/000262

(22) International Filing Date: 27 January 2005 (27.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0401832.1 28 January 2004 (28.01.2004) GB

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **OXON-ICA, LTD [GB/GB]**; Unit 7, Begbroke Science & Business Park, Sandy Lane, Yarnton, Kidlington, Oxford OX5 1PF (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WAKEFIELD, Gareth [GB/GB]**; Oxonica Limited, Unit 7, Begbroke Sciences & Business Park, Sandy Lane, Yarnton, Kidlington, Oxford OX5 1PF (GB). **PARK, George, Barry [GB/GB]**; Oxonica Limited, Unit 7, Begbroke Sciences & Business Park, Sandy Lane, Yarnton, Kidlington, Oxford OX5 1PF (GB).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/072695 A1

(54) Title: METAL OXIDE PARTICLES USEFUL AS FREE RADICAL SCAVENGEERS IN SUNSCREEN AND COSMETIC COMPOSITIONS

(57) Abstract: A composition is described which comprises a component which is susceptible to free radical attack, said composition comprising, as a free radical scavenger, at least one particle having a size not exceeding 100 nm of an oxide of a rare earth or transition metal possessing adjacent oxidation states. The composition is preferable a UV sunscreen composition suitable also for cosmetic use.